Optical add/drop apparatus and the method for making the same

ABSTRACT

New designs of optical devices, particularly for adding or dropping a selected wavelength or a group of wavelengths are disclosed. In one embodiment, an optical filter is positioned a distance from a first lens to form an assembly with a mechanical axis. The optical filter is configured at a selected wavelength and reflecting light beams at wavelengths other than the selected wavelength and transmitting a light beam at the selected wavelength. The distance is obtained with respect to a reflection measurement of a light beam at a wavelength other than the selected wavelength such that the reflection measurement is minimized. A second lens is initially positioned towards the optical filter. Before being fixed with respect to the assembly, the second lens is laterally shifted from the mechanical axis of the assembly to collect with a minimum loss a light beam refracted from the assembly. Such lateral shift also benefits when a light beam comes out from the second lens.